FINAL REPORT FOR:
THE SASKATCHEWAN BEEF DEVELOPMENT FUND

of the Province of Saskatchewan
as represented by the
Saskatchewan Department of Agriculture and Food

BDF024 96000292

Submitted by:

FOUNDATION FOR ANIMAL CARE SASKATCHEWAN

502-45th Street West, 2nd Floor
Saskatoon, SK

November 14th, 1998

CATTLE FACS BROCHURES

Final Report

a) **SUMMARY**

Mission Statement: *To promote the responsible care and use of animals in the livestock industry.*

Objectives: *FACS focusses on three main areas, educating producers, raising public awareness and educating Saskatchewan youth.*

The ***Cattle FACS*** *series is an educational tool for producers. It is designed to assist both new and existing producers by providing knowledge of symptoms, cause and treatment of common ailments found in modern cattle production, thus reducing the number of downer and condemned animals filtered through the auction market .*

The purpose of this project is to educate producers as to the importance and benefits of responsible treatment of livestock. It is vital that producers know that the standard of care given to their animals will reflect on the developmental progress and well being of the animal. Consequently, management, handling and care techniques used, will contribute to the quality and value of the final product.

b) TECHNICAL REPORT

BACKGROUND AND OBJECTIVES

With participation from veterinarians, producers and marketers, FACS has developed a series of bovine brochures addressing issues that can affect animals destined for market. Brochures addressing Cancer Eye, Carcass Quality Shortfalls, Non-Ambulatory Cattle, Cattle Handling, Calving, Colostrum, Euthanasia and Calf Scours have been completed.

The Cattle FACS Series has been received very positively by the livestock industry. Although the target audience is Saskatchewan producers, FACS received requests for the brochure from across Canada and from other countries including the United States, Australia, Bulgaria, Finland and the United Kingdom. In addition, Weir Veterinary Clinic in Lloydminster has had reprints and distributed through their clinical newsletter; and the CCA has had reprints and included them in the CCA Quality Starts Here resource. Lastly, FACS and the CCA have approached the Cattle Handling Working Group (c/o CCA) to consider making the Cattle FACS series a national initiative.

In the development of these brochures, FACS involved producers, veterinarians, SK Livestock Markets and Order Buyers Association and the Canadian Cattlemen's Association. Prior to print, we approached the following groups to review each brochure and to endorse it: CCA, SK Cattle Feeders Association, SK Dairy Association, SK Livestock Association, SK Auction Market and Order Buyers Association and the SK Stock Growers Association. In completing the Euthanasia brochure, the Saskatchewan SPCA also endorsed it.

PERSONNEL

The Cattle FACS Series is produced with the assistance of several industry participants.

Project Coordinator

- *Adele Buettner, Executive Director of FACS*
  - *Research*
  - *Writing*
  - *Committee Management*
    - *committee input*
    - *committee approval and endorsement*
  - *Formatting*
  - *Liaison with printer*
  - *Distribution*

Total in kind time - 40 hours = $733.20 (per brochure)

Committee Involvement

- *Ms.Peggy Strankman, Canadian Cattlemen's Association*
- *Mr. Brian Weedon- SK Stock Growers/FACS Board*
- *Dr. Eugene Janzen - WCVM/FACS Board*
- *Mr. Wayne Gamble - FACS Board*
- *Dr. Del Pearson - SK Dairy Association/FACS Board*
- *Mr. Larry Brack - SK Dairy Association/FACS Board*
- *Mr. Mike Fleury - President, SK Auction Market and Order Buyers Association*
- *Mr. Roy Rutledge - Past President, SK Auction Market and Order Buyers Assoc.*

Total in kind time - 35 hours per brochure

** FACS absorbs in office costs including fax, photocopying, long distance telephone and mailings.*

** - In kind support*

d) EQUIPMENT

Not applicable

e) PROJECT DEVELOPED MATERIALS

- *Enclosed are samples of the Cattle FACS Series. Please note the brochure on Euthanasia and Calf Scours will be forwarded at a later date.*

- *Please note the report in the FACStracs newsletters.*

f) PROJECT PHOTOS

Product samples are included.

g) ACKNOWLEDGEMENT

Recognition of this project was acknowledged through:

- *FACStracs news letter (numerous issues in 1996, 1997&98)*
- *Verbal report at the SK Stock Growers Association Annual Convention (given by Adele Buettner - June 1996)*
- *Television interview with the Original Productions Company (given by Adele Buettner - June 1996)*
- *Foundations 5th Annual Meeting January 1997*
- *Foundations 6th Annual Meeting January 1998*
- *Verbal report at the SK Cattle Feeders Annual Meeting - February 1998*
- *Signage at the Foundation's trade show booth (ongoing)*
- *Recognition of support is on each issue of the Cattle FACS brochures*
- *Recognition of support on membership lists (see attached)*

In case of an emergency please refer to the telephone numbers below:

- Saskatchewan SPCA: 382-7722
  (Provincial Office – Saskatoon)
- Saskatchewan Brand Inspectors: 933-6191
  (Provincial Office – Saskatoon)
- Saskatchewan District Veterinarians:
  - 780-5220 (Regina)
  - 975-4185 (Saskatoon)
  - 778-5030 (Swift Current)
  - 554-2202 (Wynyard)
  - 786-5300 (Yorkton)
  - 937-3633 (Battleford)
  - 691-3450 (Moose Jaw)
  - 927-2255 (North Portal)
  - 953-8614 (Prince Albert)
- Saskatoon Processing Co.: 934-4887

The Cattle FACS Series includes the following brochures:

- Calf Scours
- Calving
- Cancer Eye
- Carcass Quality Shortfalls
- Cattle Handling
- Colostrum and Its Importance
- Euthanasia
- Non-Ambulatory Cattle

Call the FACS office for your copy.

Produced as a public service by:

Foundation for Animal Care SK

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Associate Memberships are available for
$50.00 – $199.99 + GST.
Active Memberships start at $200.00 + GST.
(receipts are issued)

This FACS initiative is endorsed by:

- Canadian Cattlemen's Association
- SK Dairy Assoc.
- SK Cattle Feeders Assoc.
- SK Livestock Assoc.
- SK Livestock Markets and Order Buyers Assoc.
- SK Stock Growers Assoc.
- SSPCA

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CATTLE FACS

PROMOTING RESPONSIBLE ANIMAL AGRICULTURE

EUTHANASIA IN CATTLE

Procedures to follow in case of emergencies or to prevent further animal suffering from illness or accident.

When raising cattle, there is always a risk an animal will become seriously injured, fail to thrive or become so ill that any treatment is unsuccessful or impractical. Experienced livestock owners occasionally need to make decisions regarding when animals are beyond treatment and it is simply more humane to euthanise the animal. Active rather than passive (let them die on their own) euthanasia of poorly convalescent cattle is an accepted practice and the owner's responsibility.

Firearms

▪ The use of a firearm is most appropriate when the animal is partially mobile and it would cause undue suffering to move the animal to a restraining chute. The safe use of firearms is critical and means no persons, livestock or property should be in the line of sight between the shooter and the animal or behind the animal. The bullet should enter the animal directly from the front (midline, between the eyes and ears), in line with the rest of the animal's body and pitched in line with the slope of the neck (figure 1 & 2). If the animal is young, and the head is turned to the side, the bullet may pass through, endangering other animals and people.

A large bore shotgun (20 gauge or greater) is a good choice for a confined area such as an auction yard or feedlot pen, as it will quickly and effectively kill the animal. A shotgun can be used if the distance is not over 10 metres. If the animal is non-ambulatory, using a .22 caliber rifle is acceptable since the distance between the end of the muzzle and the skull is short. However, occasionally destruction of the brain is insufficient and the unconscious animal may need to be bled to quickly euthanise. It is acceptable to use a high-powered rifle in an open field if no buildings, roadways, vehicles, other animals or people are nearby.

Lethal Injection

(Should by done by a veterinarian or trained technician)

▪ Pharmaceutical mechanisms used to produce death, cause either a narcotic overdose or paralyse the life functions (heartbeat, respiration) with a noxious chemical. The animal must be restrained before the injection (usually an intravenous one), can be given. Euthanasia by injection is usually without struggle, vocalization or bleeding and is therefore the method of choice in a public place.

Animals destroyed by lethal injection should be buried to prevent scavengers from consuming the carcass and being affected by drug residue in the tissues. Lethal injection is also the preferred method if it is necessary to preserve brain tissue for laboratory use (for example, when rabies is suspected).

Captive Bolt

▪ A captive bolt device uses a small powder cartridge that when activated, drives a bolt through the skull and into the brain, causing immediate death. Again, the animal must be incapacitated by its injury or restrained in a chute. The device must be placed either on the front of the head (midline, halfway between the eyes and ears) or behind the skull (midline, very high on the neck, device pointing to the nose). See figure one and two.

Figure 1 – Location of the brain within the skull of an older bovine and the correct placement and direction of shot or captive bolt penetration. Note the direction into the skull is perpendicular to the face of the skull and in alignment with the line of the neck.

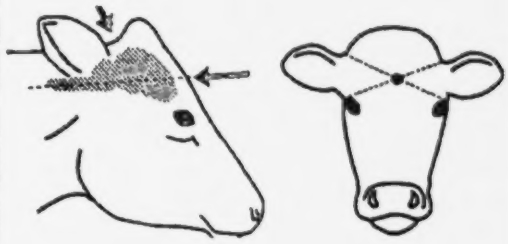

Figure 2 – Shows that the general lower position of the brain in a calf, means the correct placement of the captive bolt or the aim of the firearm is lower as well. Note the direction is the same as in a mature bovine and the point of impact is in the centre of the skull between the ears.

Stunning

▪ To stun, an animal must be incapacitated by its injury or restrained in a chute, so there is no movement. A stout blow with a heavy hammer or maul, striking the front of the skull midline between the eyes and ears (Figure 1 & 2) will cause severe cerebral injury and immediate death. For euthanasia, the blow must be forceful enough to crush the brain thereby causing all life processes to cease, especially heartbeat and respiration.

Printing courtesy of the Saskatchewan Beef Development Fund.

CATTLE FACS

PROMOTING RESPONSIBLE ANIMAL MANAGEMENT

NON-AMBULATORY CATTLE "DOWNERS"

Good management practices, proper livestock handling and prompt attention to sick cattle are routine management procedures producers should follow to avoid the occurrence of non-ambulatory cattle. Non-ambulatory animals must be dealt with in a humane manner while minimizing economic hardship.

Definitions:

- A non-ambulatory animal (commonly referred to as a "downer") is unable to stand up or walk, even if assisted.
- An infirm animal is still ambulatory but has a disabling condition.
- A cripple is an animal which is obviously lame on one or more limbs but still able to get up unassisted and move about relatively freely.
- Infirm and crippled animals often become "downers."

Effects on the Industry:

- Economic loss: on farm disposal versus sale.
- Pose handling difficulties for marketing agents and the transportation industry (extra costs may be passed on to producers).
- The public perceives "downed" cattle as indications of negligent animal care. This perception will erode the public's confidence in our ability to responsibly manage the welfare of our cattle.

Ways to prevent non-ambulatory livestock:

- **Identify and manage lame, thin and sick cattle promptly. Most cattle go down because their initial problems were ignored.**
- Adequate space, secure footing, properly designed and maintained housing and loading equipment reduce costly accidents, injuries and bruising.
- Marketing animals while they are still in good physical condition reduces transit occurrence of non-ambulatory animals.
- Keep hooves well trimmed to prevent falls and treat foot problems that can cause lameness promptly.
- Follow good management and sanitation practices to minimize bacterial infections such as foot rot.
- Handle cattle quietly and gently to prevent injuries.

Printing courtesy of the Saskatchewan Beef Development Fund.

Management Strategies

Ways to handle non-ambulatory livestock:

- Even with the best precautions, animals may still sometimes become non-ambulatory.
- When non-ambulatory situations occur due to accidents, medical complications or terminal illness, these **animals must be handled promptly and humanely.**
- Deliver an injured, but otherwise healthy, non-ambulatory animal directly to a processing plant. Ensure that the vehicles and equipment required are capable of properly handling non-ambulatory animals.
- Consult your veterinarian for advice.

Older, thin or injured cattle:

These cattle are at higher risk of going "down" on the farm or in transit. If an animal is "down" the producer needs to decide:

1. will medical care get the animal back on its feet?
2. can the animal be humanely moved to an abbatoir?
3. should the animal be humanely put down on the farm?

Calving difficulties:

- Delayed and/or difficult calving may be a sign of a large calf. A veterinarian should be contacted.
- The correct amount of traction to pull a calf from a first-calf heifer is that which 2 people (or 250 lbs.) can accomplish without mechanical assistance.
- Provide calving areas with secure footing, ample space, bedding and with wide gates.
- In general, prevent calving paralysis (pinched nerves) by following proper calving procedures including correct and careful use of calving devices and early intervention.

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CATTLE FACS

PROMOTING RESPONSIBLE ANIMAL MANAGEMENT

CARCASS QUALITY SHORTFALLS

To get the highest possible return for your product, and to maintain consumer confidence in the high quality of Canadian beef, practices which cause damage to the carcass must be reduced or eliminated by the responsible management, handling and transportation of cattle. Bruising, injection site lesions, hide damage and other defects in beef carcasses are costing the industry up to $70 per head.

Carcass quality shortfalls are problems for both feedlots and cow/calf producers. Calves that receive improper injections will develop lesions and abscesses that are often retained as adults. In addition, affected muscles have been found to be less tender. It's also important for backgrounders: calves and yearlings that change ownership several times and are rebranded with each change results in severe damage, making the hide almost worthless.

BRUISING AND DARK CUTTERS (D.C.'s)

Causes:

Bruising:

- horns; overloaded/underloaded trucks; rough handling; low-hanging bars in alleyways; decks and loading docks; protruding bolts; lack of fat cover and bonier shape in cows; slick floors.

Dark Cutters:

- fluctuating climatic temperatures; fasting; mixing strange cattle together; genetics (exotic breeds have a higher incidence).
- prolonged withdrawal of Melengesterol Acetate (MGA) in feedlot heifers.
- presence of stags or improper castrates in a load of finished cattle.

Management Tips:

- Dehorn cattle or use polled bulls.
- Handle cattle gently at all times. *Slow down.*
- Minimize the use of prods, whips and sticks.
- Load appropriate number of cattle in transport trucks.
- Design corrals to move cattle easily.
- Minimize mixing of cattle, especially just prior to slaughter.
- Ensure that cattle are on feed up to slaughter.
- Ensure precise 48 hour withdrawal of MGA prior to slaughter of feedlot heifers.
- Castrate properly to avoid stags. When these animals get into feedlots, they contribute to dark cutters.
- Ensure proper implanting techniques.

Printing courtesy of the Saskatchewan Beef Development Fund.

INJECTION SITE LESIONS

Causes:

- Dull or dirty injection needles, too large a volume of medicine given in one injection site, and poor handling restraints during treatment.

Management Tips:

- Inject intramuscular drugs and vaccines in lower value cuts of meat such as the neck (never top hip).
- Inject calves in the neck. Lesions stay in the prime cuts and show up in the tissues as adults.
- Give all drugs subcutaneously in neck if label permits.
- Use 5-10 cc per injection site; space injections several inches apart.

HIDE DAMAGE

Occurrence and Causes:

- Approximately 37% of hides are damaged by the prevalence of brands, with another 34% being tag damaged. Insect bites, urine damage, ringworm, pour-on treatments and excess use of electric prods are other causes of hide damage.
- Overall, the decrease in value of hides can be 0-8% of the total value of fed cattle.
- Branding is often required by branding institutes as a mechanism to take security on livestock loans.

Management Tips:

- Keep pens, alleys, loading and unloading areas, and transport trucks clean and dry.
- Use a small brand and brand properly. Consider moving brands from rib to hip, high and back.
- Use preventive treatment for external parasites, for example warbles.

Appreciation to the CCA for material information.

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CATTLE FACS

PROMOTING RESPONSIBLE ANIMAL MANAGEMENT

CATTLE HANDLING *IN THE ZONE*

Animals have a natural boundary called the *"Flight Zone"*. Understanding Flight Zone principles reduces stress on cattle and minimizes accidents to handlers. The size of the Flight Zone varies according to a number of factors.

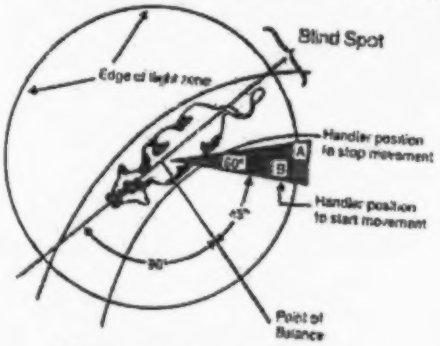

Diagram courtesy of Dr. Temple Grandin

FACTORS REDUCING AN ANIMAL'S FLIGHT ZONE SIZE

- Frequent contact with people
- History of gentle handling
- Calm environment

FACTORS ENLARGING AN ANIMAL'S FLIGHT ZONE SIZE

- Infrequent contact with people
- History of rough or abusive handling
- Excitement

DETERMINING THE FLIGHT ZONE

Slowly walk up to a group of cattle. When the animals turn and face the handler, the handler is then *outside* the Flight Zone. A handler is on the *edge* of the Flight Zone when the animals turn around and walk away.

USING THE FLIGHT ZONE TO MOVE CATTLE

Cattle are best moved when the handler works on the edge of the Flight Zone. Animals move away when a handler enters a Flight Zone and stops when the handler leaves the Flight Zone.

TO MOVE AN ANIMAL FORWARD

- Stand in the shaded area A and B, behind the Point of Balance at the shoulder.
- Keep out of the Blind Spot at the rear of the animal.

TO MAKE AN ANIMAL BACK UP

- Stand in front of the Point of Balance.

Printing courtesy of the Saskatchewan Beef Development Fund.

TO MAKE AN ANIMAL TURN LEFT OR RIGHT

- Approach the animal head on.
- When the handler moves left the animal will turn right.
- When the handler moves right the animal will turn left.

FACTORS TO REMEMBER

- Deep penetration into the Flight Zone causes panic and escape attempts.
- Handlers should remove themselves from the Flight Zone if an animal becomes aggressive.
- Cattle have a large Flight Zone when approached head on due to their wide angle vision.
- Extremely tame cattle may no longer have a Flight Zone and may have to be led.
- Generally avoid yelling. However, docile animals may only respond to a loud voice.
- Always approach cattle slowly, never chase. Excitable animals are more prone to bruising.
- If twisting the tail, release when the animal moves.
- Use electric prods sparingly and never on breeding animals.

FACTORS THAT IMPROVE HANDLING

- Be gentle and quiet.
- Keep an even distribution of lighting (no shadows, bright spots or light glaring in the eyes).
- Provide a level floor (no bumps, dips, puddles, etc.).
- No moving or flapping objects should be present.
- All handling facilities (loading ramps, single file chutes and crowding pens) should have solid sides to prevent the animal from seeing distractions outside the fence.
- Since cattle panic at dead ends, ensure sliding one-way gates are constructed of bars or heavy mesh wire. Crowding pens should be solid so animals will not turn back.
- Take advantage of the animal's natural tendency to turn and circle handlers by constructing curved chutes. Curved loading chutes place the handler in the best position on the edge of the Flight Zone.

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CATTLE FACS

PROMOTING RESPONSIBLE ANIMAL AGRICULTURE

CALF SCOURS OVERVIEW: GENERAL PRINCIPLES

1. The Importance of Colostrum:
The major factor influencing survival of calves is the level of immunity at the onset of diarrhea. The calf must get colostrum! The level of immunity required for calves born and confined in a farm yard is much higher than for calves born and "mothered" out on the range.

2. Hypothermia:
Often calves that have "crashed" are hypothermic (low temperature). If calves feel cold, have no sucking reflex but are not dehydrated these calves are probably too "cold." This could be confirmed by taking their temperature with an inexpensive digital thermometer. Newborn calves with a temperature less than 35°C (96°F) are considered hypothermic and should be treated. They will not warm up on their own. These calves must be "warmed up" before they will absorb fluids given orally.

3. If calves appear cold:
a) treating dehydrated calves that are hypothermic, may not be successful without warming them up.
b) Hypothermia calves should be:

- Tubed with warm fluids
- put in a "hot box"
- If really "cold" put in a hot water bath
  (Less than 30°C (86°F))

4. Fluid and Electrolytes: If calves get sick between 5 and 25 days of age, fluid therapy to correct dehydration and acidosis is the cornerstone of any treatment.
a) It is important to correct the dehydration, acidosis and electrolyte imbalance caused by scours.
b) If the calf is down and severely depressed, I.V. (intravenous) therapy is probably required.
c) In most cases, if the calf is still able to stand, electrolytes given orally by tube will help.

5. Antimicrobial: Some veterinarians believe that when calves develop diarrhea between 5 and 25 days of age the cause is rarely bacterial, therefore, believe that antibiotics may do more harm than good.
a) Oral preparations (scour pills or boluses) are of limited value and are rarely indicated, except in calves greater than six weeks of age with bloody diarrhea.
b) Injectable antibiotics are more effective, have a broader range of activity, and are more appropriate for several conditions than oral preparations.
c) Often there are several disease processes occurring, e.g. navel infection and diarrhea simultaneously. Under these circumstances, an injectable antibiotic is the right choice.

Printing courtesy of the Saskatchewan Beef Development Fund.

CALF SCOURS: TRIAGE & TREATMENT

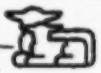
1. To check for passive transfer:
It is difficult to assess if a calf has received enough colostrum. *If in doubt, tube the calf with colostrum.* If there are a lot of sick or dead calves, a series of blood samples to look for transferred immunoglobulins is the only way to make an assessment.

2. Diarrhea but not depressed:
a) If the calf is bright, alert, responsive, and not depressed watch closely. Immediate treatment is not necessary.

3. Diarrhea and slightly depressed:
a) Allow the calf to nurse the cow as normal. Do not remove the calf from the cow.
b) Tube with 2 litres commercial electrolytes, one with an alkalinizing compound in it, twice daily until manure begins to firm or calf is no longer depressed. If more than two days of therapy is required, contact veterinarian. Make sure the calf continues to nurse.

4. Diarrhea, eyes sunken (dehydrated) & very depressed:
This calf requires I.V. fluids. Contact veterinarian, or:
a) Tube calf with 2 litres of electrolytes twice daily until manure begins to firm or calf is no longer depressed.
b) Give a broad spectrum intra muscular antibiotic once a day for 3 consecutive days.
c) Feed 1.5 litres of whole milk twice daily if calf doesn't suck.
d) If more than 3 days of therapy are required, contact veterinarian
Note: When feeding or tubing the electrolytes (like Revibe or Lifeguard) do not feed milk at the same time. Stagger the feedings.

5. If calves appear wobbly: Commonly western Canadian calves don't develop a viral diarrhea. Many of these calves don't dehydrate or do so slowly. Instead their electrolyte absorption is compromised and the main clinical feature is the "drunken sailor" demeanor.
a) Some of these calves are not dehydrated, but are weak and unable to get up.
b) The manure from the calves may not be fluid. It may be copious and frothy with mucous present.
c) These calves are acidotic and need oral fluids with bicarbonate or may even need bicarbonate (an alkalinizing agent) containing fluids I.V.



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Providing Assistance at Calving

5. *When should you present a heifer or cow to a veterinarian for Caesarian Section?*

A) If the Calf is too Big! This is measured by the following:

- If the front feet fill the pelvis and you can't get your hand beside them.
- If with gentle pulling, you cannot get the head and feet into the pelvis at the same time. Two people using body weight only (e.g. 250 lbs.).
- If the heifer/cow has been actively straining for 30-40 minutes and hasn't been able to push the head and feet (or the tail head if coming backwards) into the bony part of the birth canal.

B) If there are other complications like:

- incomplete opening of soft tissues of the birth canal.
- twisted uterus.
- misshapen pelvis.
- fetal monster.

6. *The most common post-calving complications:*

A) Prolapsed Uterus

If the cow is straining badly and the uterus is very flaccid, she may push the uterus out through the birth canal, inside-out. This large solid mass of tissue with 2-3 inch long "buttons" on the surface where the membranes attach is the uterus "inside out."

Action Indicated:

- Restrain the cow. The uterus is less likely to be damaged and is easier to be replaced in cows that are down.
- If there is a delay, cover the uterus with a wet towel or blanket to protect from cold and keep moist.
- Keep other animals including cows away. They may eat or damage the uterus.
- Call your veterinarian.

B) Retained Placenta

Normally the afterbirth will come away by 24 hours. There is no concern unless the cow is sick: example ,with a high temperature and "off feed."

Action Indicated:

- Daily antibiotic injections as directed by your veterinarian. If there is no response in 3 days, call your veterinarian.

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CATTLE FACS

PROMOTING RESPONSIBLE ANIMAL MANAGEMENT

CALVING

When and How to Help

The basis of a cow-calf enterprise is a healthy cow with a healthy nursing calf. Knowing when and how to help is an important part of responsible calving management.

1. A cow or heifer is having difficulty when:

- the cow actively strains for 40 minutes with no progress.
- 90 minutes have passed since the waterbag first appeared.
- the legs emerge with the surface of the hooves pointing up
- only the head or tail emerges.
- an uncalved cow is mothering another calf.
- a cow has demonstrated greater than 5-6 hours of anxiety, e.g. walking about, tail extended, apparently looking for something.

2. To examine a cow that is having difficulty:

- restrain the cow either in a chute or in a safe and humane manner.
- wash all manure away from around rectum and vulva.
- soap your arm or use plastic sleeves with soap. Hairy arms can bruise the birth canal.
- explore the problem.

3. Calves should only be pulled if:

- two front legs and a nose OR two hind legs and the tail head can be guided into the bony part of the birth canal.

  NOTE: To distinguish front and back legs, feel the joint above the one nearest the hoof. If it bends the same direction as the lower joint it is a knee—front leg. If it bends the opposite direction it is a hock--back leg.

4. If the calf is malpositioned:

Gently position the legs and head correctly. Gently push the calf back a little way to get some working room. Do not push against the cow's contractions—work with her, not against her. Cover the teeth and feet with your hand as you move them to reduce injury to the cow.

Note: If the position is too difficult to correct in 20 minutes, or two strong people cannot pull the calf—call your veterinarian or an experienced cattle producer.

Attach loops of soft nylon rope or surgical chain to the legs. By convention, place a loop above the fetlock joint as well as a half hitch below. A loop may also be placed around the head—over the poll behind the ears and under the mouth. NEVER attach a loop to the lower jaw.

Pull back and down on the ropes for a head-first calf, straight back for a tail first calf. Pull alternately on either leg to angle the shoulders through the pelvis. Two strong people (pulling force of 250 lbs. max.) should be able to pull a calf into the birth canal.

Use calf pullers with caution. Remember to release tension periodically. Allow cow to push calf out.

Printing courtesy of the Saskatchewan Beef Development Fund.

How to tell Cancer Eye from Pinkeye

Condition	Cancer Eye	Pinkeye
Eye	White/pink tissue growth. Tumours usually on the third eyelid, rarely on the eyeball.	General swelling inside. White of eye is red. Lesions on the eyeball.
Tearing	Yes	Yes
Pain	Not in early stages	Yes
Eye spasms	No	Yes, will hold eye shut
Age of animal	> 5 years	Any age
Seasonal	No	Yes, summer
Treatment	Surgery/culling	Antibiotic

Source: Cattlemen's October 1995

Treatment Options

Early and Middle Stages

- In the early stages, immediate surgery or liquid nitrogen treatment of tumour are the choices. If the animal is a cow with calf, consider surgery (tumour or whole eye) and cull after weaning. Another option would be sale for slaughter. The likely result would be rail grade with possible head condemnation.

Advanced Stage

- Advanced stages will result in partial or whole carcass condemnation without compensation.

Action

- Check animals regularly. Early detection and treatment can reduce animal suffering and offer more choices for return on investment.
- If cancer eye is not detected until the last stages, the animal should be destroyed at the farm level and ***not even transported to the auction market or packer.***

Produced as a public service by:

Foundation for Animal Care SK

FACS

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FACS is an industry supported, non-profit organization promoting the responsible care of food producing animals.

Associate Memberships are available from $50.00-$199.99. Active Memberships start at $200.00 (receipts are issued).

This FACS initiative is endorsed by:

- Canadian Cattlemen's Association
- SK Cattle Feeders Assoc.
- SK Dairy Assoc.
- SK Livestock Assoc.
- SK Livestock Markets and Order Buyers Assoc.
- SK Stock Growers Assoc.

CATTLE FACS

PROMOTING RESPONSIBLE ANIMAL MANAGEMENT

CANCER EYE

To avoid unnecessary suffering for the affected animal, and to protect your economic investment, learn to identify and treat this disease early.

If not detected early, Cancer Eye will eventually cause severe trauma and suffering to the animal. **Producers should deal with this problem on the farm.** Your management short-falls should not be passed on to others such as auction markets, order buyers or slaughter facilities.

Causes

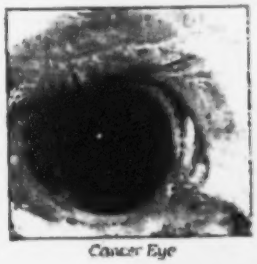
- The cause is unknown but may be genetic. Ultraviolet light is known to be a factor.
- All breeds are at risk, but cancer eye appears most often in white-faced cattle that lack pigment around the eye.

Symptoms

- To check for early stages of cancer eye, pull down on the cow's lower eye lid and look for any abnormal tissue growth. This is best done when the animal is in a chute, so combine eye checks with another activity such as fall pregnancy checks or spring vaccination.

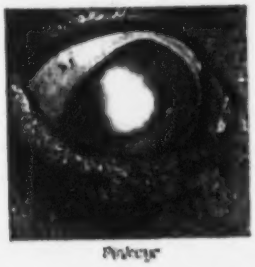
Correct Diagnosis is Important

- Cancer eye can be mistaken for pinkeye and, therefore, treated inappropriately.
- To obtain a correct diagnosis, and prognosis for surgical treatment, contact your veterinarian.



Cancer Eye

Cancer Eye



Pinkeye

Printing courtesy of the Saskatchewan Beef Development Fund.

Notes on Colostrum:

1. A calf needs 1–2 litres of colostrum with 2–12 hours after birth. Almost all calves that "sicken" with diarrhea, navel ill, septicemia (blood poisoning) or pneumonia have failure of passive transfer (FPT) of IgG (colostral immunoglobulins) from cow's first milk.
2. Take note of calves that have not nursed properly within 2–3 hours post partum. A judgement on action to be taken should be made.
   a) In cold weather calves will chill and may not nurse in time. They should be tubed because colostrum provides readily available energy as well.
   b) On a warm day, give the pair more time.
   c) Assumed an apparently abandoned calf has not suckled and should be fed.
3. Be prepared for mothering and nursing challenges by taking advantage of opportunities to collect colostrum from cows that lost calves or that have an abundance of first milk.
4. Fresh colostrum, on a busy day during the calving season, may be kept at room temperature. If no calvings occur, fresh colostrum can last 7–10 days in a refrigerator. Freeze extra colostrum in 1–2 litre lots for easy storage and thawing.

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Colostrum: It's Important

Newborn calves have virtually no immunity of their own. Antibodies are transferred from the cow in colostrum (first milk). These antibodies protect the calf from disease for the first two months until the calf begins to make its own antibodies.

Significant absorption of antibodies only occurs in the first 12 hours of life. After that time most antibodies are digested although some can act locally in the gut. It is essential calves receive colostrum within a maximum of 12 hours to develop immunity to infectious agents they may meet in the first two months of life.

Management:

- ideally calves should nurse within the first 6 hours after birth for maximum absorption of antibodies.
- weak or mismothered calves should be tubed with colostrum collected fresh or stored frozen and thawed in warm water when needed. Colostrum from any cow can be used.

To Tube Calves:

- obtain a tubing kit from your veterinarian or an enema kit from a pharmacy.
- restrain the calf standing or sitting down – but upright.
- measure the tube against the calf to estimate how much must be passed to reach the stomach. Mark the tube.
- introduce the nozzle of the tube into the calf's mouth gently. Don't lift the head.
- let the calf swallow.
- to be sure you are in the right place you should be able to feel the tube pass down the neck. If you can feel the tube then you know you are not in the windpipe.
- gently pour down 1–2 litres of colostrum.
- clamp off the tube and remove.

Printing courtesy of the Saskatchewan Beef Development Fund.